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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,122	08/25/2000	Isao Omura	1217-001559	5769

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EXAMINER

SALVATORE, LYNDA

ART UNIT	PAPER NUMBER
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1771

(0)

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/623,122	Applicant(s) OMURA ET AL.	
	Examiner Lynda M Salvatore	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 10-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 24-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4 and 5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of restriction requirement in Paper No. 6 is acknowledged. The traversal is on the ground(s) that a polypropylene fiber could not be made by the method of Group II claims 10 and 11. This is not found persuasive because the method steps of melting and kneading a resin composition prior to spinning a fiber may be used to form any resin based fiber regardless of composition. The requirement is still deemed proper.
2. An error on the part of the Examiner has been discovered with respect to the election restriction requirement. Applicant's preliminary amendment entered in Paper No. 3 was not considered before the issuance of the election restriction requirement. However, newly added claims 24-33 do not change the grouping of claims or the restriction requirement. Examiner has added claims 24-28 directed to the wet-responsive fiber to Group I, and added claims 29-33 which are directed to the non-woven, to Group III. Therefore, Group I claims include 1-9 and 24-28. The restriction is as follows:
3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, and 24-28 drawn to wet responsive fiber, classified in class 428, and subclass 364.
 - II. Claims 10-11, drawn to process for making wet responsive fiber, classified in class 264, subclass 176.1+.
 - III. Claims 12-23 and 29-33 drawn to non-woven fabric, classified in class 442, subclasses 414 and 415.

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2. The inventions are distinct, each from the other because:

The inventions of Group I and Group II are related as wet responsive fiber and process for making are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the method as claimed can be employed to make a materially different product such as a polypropylene fiber.

The inventions of group I and III are related as intended final product. The final fiber product would be useful to make yarn for woven or knit fabric.

The inventions of group II and III are un-related. The process of group II does not produce the product of group III.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5,8,9,24 and 25 are rejected under 35 USC 102(b) as being anticipated by Palumbo, WO 96/17681.

The published PCT application is directed to a super-absorbent material comprised of anionic and cationic functional groups (Abstract). Palumbo discloses that the super-absorbent

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materials are typically cross-linked hydrophilic polymers (Page 1, lines 6-10). Palumbo teaches that the super-absorbent material is particularly well suited for diapers and may take the form of granules or fibers (Page 11, lines 23-31). The anionic super-absorbent group includes various functional groups such as sulphate, phosphate and carboxyl groups. Palumbo teaches that the super-absorbent anionic group is generally attached to a cross-linked base polymer such as polyacrylic acid or polyvinyl alcohol as well as starch and cellulose based polymers (Page 6, lines 22-37). The cationic super-absorbent groups include cross-linked cellulose such as polysaccharide or may be derived from a water-swellaable, water insoluble polymer based on diallylic quaternary ammonium salt monomer, cross-linked with polyfunctional vinyl compound (Page 10, lines 22-37). Palumbo teaches that the ratio of the super-absorbent anionic and cationic material ranges from 3:1 to 1:5 and most preferably from 2:1 to 1:2.

4. Claims 1-5,8,9,24 and 25 are rejected 35 USC 102 (a) as being anticipated by Goldman, WO 98/37149.

The published PCT application to Goldman discloses a polymer composition comprising a cationic and anionic polymer (Abstract). The polymer composition may be formed into various articles such as fibers, films, foams and sheets (Page 17, Paragraph 4). Goldman teaches that the ratio of anionic and cationic functional groups is .65 parts anionic and .35 parts cationic (Page 17, Paragraph 1). Goldman also discloses that non-acid monomers such as carboxylic acid, sulfonic acid esters, hydroxyl groups, amides, amino quaternary ammonium groups may be included in the composition (Page 15, Paragraph 1). Suitable cationic groups include slightly cross-linked anionic and nonionic base polymers to which cationic functional groups attach. Examples of various base polymers include polyvinyl alcohol and poly(meth)acrylic acid.

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Goldman further teaches that cationic groups may also comprise polyethylenimine derivatives and polysaccharide based compound such as aminoethyl cellulose and aminoethyl starch (Page 13, Paragraph 2). Typical anionic forming polymers include carboxyl-based groups such as carboxymethyl cellulose (Page 14, Paragraph 6).

Claim Rejections - 35 USC §103

5. Claims 6,7 and 26-28 are rejected under 35 USC 103(a) as obvious over Palumbo WO 96/17681 or Goldman WO 98/37149 as applied to claims 5 above and 25 and further in view of Chatterjee et al., US 3,889,678

With respect to claims 7 and 26, Palumbo and Goldman fail to expressly disclose the claimed base resin material used in the composition, however, the patent issued to Chatterjee et al, teaches a cellulose graft polymer containing non-ionic and ionic polymer moieties as absorbent media in absorbent dressings (Title). Chatterjee et al., teaches that the absorbency of the naturally occurring cellulose polymer may be improved with various chemical techniques such as functional group substitution, introducing new functional groups, and cross-linking (Column 1, lines 10-22). Chatterjee et al., discloses various poly-acrylate containing non-ionic moieties which comprise about 10%-60% of the cellulose graft co-polymer (Column 2, lines 22-31). Chatterjee et al., further teaches that the cellulosic fibers used to make the cellulose graft copolymer fiber may be cotton, or rayon (Column 2, lines 31-39). Therefore, motivated to provide a highly absorbent fiber it would have been obvious to one having ordinary skill in the art at the time the invention was made to use conventional absorbent materials such as a naturally

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occurring cellulose polymer as taught by Chatterjee et al., as the base resin in the wettable fiber compositions of Goldman or Palumbo.

With respect to claim 6, Palumbo and Goldman also fail to disclose the ratio of base, anionic and cationic polymers used in the composition, however, it would have been obvious to one having ordinary skill in the art to optimize the amounts of each material since it is known in the art that the combination of anionic and cationic forming polymers act as effective super-absorbents for use in personal care articles. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

With respect to claims 27 and 28, Palumbo and Goldman teach the claimed anionic group of carboxymethyl cellulose and cationic derivatives and polysaccharide based compound such as aminoethyl cellulose and aminoethyl starch.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 4,818,598

US 5,286,827


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls
August 14, 2002



CHERYL A. JUSKA
PRIMARY EXAMINER